

**REMARKS**

The Final Office Action mailed September 9, 2003, and the prior art relied upon therein including that newly cited, have been carefully studied. Upon entry of the present amendment, the claims in the application will be only the elected claims 1, 2, 4-6 and 11-14. These claims define patentable subject matter under §§ 102 and 103, whereby their allowance is warranted. Accordingly, applicant respectfully requests favorable reconsideration, entry of the amendments presented above, and allowance.

The restriction requirement has been repeated and made final. As applicant has only two options, i.e. either petition or accept the examiner's position, and as petitioning is not a viable option, applicant has no choice except to accept the examiner's ruling in this regard. This means that the PTO's holding that the inventions are patentably distinct from one another is final.

Accordingly, applicant proposes, among the amendments presented above, to delete the non-elected claims 7, 9, 10 and 15 without prejudice to the present invention, and without prejudice to applicant's rights to pursue the patentably distinct method invention in a divisional application, if applicant chooses to do so, applicant in such a case being able to proceed without any penalty whatsoever,

taking advantage of all the rights provided by law, including those provided by §§ 121, 120 and 119.

Claims 1-6 and 11 have been rejected as obvious under §103 from Geisel in view of Reinert. This rejection is respectfully traversed.

The rejection relies primarily on Geisel as the basic reference. Applicant again respectfully notes that Geisel relates to a luminescent extruded fiber comprising 80-99% by weight of a thermoplastic polymer, with the additional materials including a metal aluminate oxide pigment and plasticizer (column 2, lines 49-53). The entire focus and the main point of Geisel is the provision of a luminescent material, and this is achieved, as pointed out in the Abstract, by "combining a metal aluminate oxide pigment with a thermoplastic polymer, and then heating, mixing, and extruding the combination into a fiber." Also see column 2, lines 41 et seq; the sentence spanning columns 2 and 3; column 3, lines 7-13; and elsewhere, including much of column 4 and Example 1 at column 5.

As the rejection correctly points out, Geisel does mention woven fabrics and "bulked continuous fiber yarn." In addition, polyesters are mentioned among the "basket" or "shotgun" disclosure of thermoplastic polymers at column 3,

lines 26 et sq, polypropylene being mentioned as "particularly preferred" and being the subject of the sole example.

The PTO agrees that Geisel does not teach wet dying. On the other hand, the rejection notes that Geisel does teach "dip coating" (column 4, line 46). However, such dip coating **has nothing to do with dying**, and to dye the luminescent fibers or yarns of Geisel would be to defeat the purpose of Geisel, and this cannot have been obvious. In this regard, the various coating methods generally mentioned by Geisel are to be used for applying other type of coating agents including (column 4, lines 49-52):

silica, polyalkylene glycols,  
polyalkylene glycol esters,  
polyalkylene glycol alcohols,  
quaternary amines, alcohol phosphate  
salts, long chain fatty acid esters,  
and long chain fatty alcohol esters.

No dyes are mentioned. To coat the fibers or yarns of Geisel with a dye which would shield the luminescent pigment which has been incorporated into the interior of the fibers of Geisel would destroy Geisel for its intended function.

It is true that Geisel may use coloring agents, but these are pigments added to the composition before extrusion or spinning of the Geisel fibers (see the paragraph spanning columns 4 and 5).

The PTO relies on Reinert to make up for the fact that Geisel does not teach wet dying. But the proposed

modification of Geisel based on Reinert, i.e. the proposed combination, would not have been obvious for at least two reasons. First, Reinert relates to the wet dyeing of a cellulosic fiber. This has nothing to do with Geisel's luminescent thermoplastic fibers. The person of ordinary skill in the art would have no reason or purpose, motive or incentive for even trying to wet dye Geisel's fibers based on Reinert's wet dyeing of the non-analogous cellulosic fibers.

Second, applicant has pointed out above that Geisel's "dip coating" has nothing to do with dyeing, or indeed coating the Geisel fibers with any coating agent which would shield or diminish the ability of Geisel's fibers to provide luminescence. As stated above, to overcoat the Geisel fibers with a dye which would inhibit the ability of the Geisel fibers to luminesce would be to fly in the face of Geisel, and this would be the very antithesis of obviousness.

For the reasons pointed out above, the proposed combination would not have been obvious to the person of ordinary skill in the art at the time the present invention was made.

Moreover, even if the combination were obvious (not accepted by applicant), such a combination would not reach the present invention. In this regard, Reinert may indeed teach wet dyeing with an anthraquinone-based dye, but it is not a

**disperse** dye as called for in claim 3, now proposed to be incorporated into claim 1.

Reinert teaches the dying of cellulose fibers "with at least one direct dye and at least one UV absorber" (see the abstract). That the dyes of Reinert are direct dyes is repeated at several places, including the first paragraph of column 1 and the last line of column 1, and elsewhere, including column 2, lines 10 et seq. Direct dyes are dyes with polar molecules which are very soluble because of such polarity. The dye components adhere to the surface of the cellulose fibers due to dipole forces, Van der Waal forces or by hydrogen bridge connections. Disperse dyes, i.e. those incorporated into at least the surface of applicant's polyester fibers, are quite different from direct dyes, even though both kinds may be anthraquinone-based.

Contrary to the direct dyes taught by Reinert which are soluble due to the polarity of the molecules, disperse dyes according to the present invention have non-polar or only weak-polar molecules which are not soluble in water. The dye gets into the surface of the fibers by diffusion, presumably forming some kind of solid solution of the dye in at least the surface of the polyester material.

The importance of this distinction is pointed out in Reinert itself, noting column 21, line 59:

Cellulosic fibre materials are to be understood as meaning for example the natural cellulose fibre, such as cotton, linen and hemp, and also cellulose pulp and regenerated cellulose. **The direct dyes are also suitable for treating hydroxyl-containing fibres** present in blend fabrics, for example blends of cotton with polyester fibres or polyamide fibres. [emphasis added]

What Reinert is correctly stating here is that the direct dyes will work on the cellulosic fibers in blends, i.e. those containing hydroxyl groups, but will not serve to dye the synthetic polymer fibers.

If it were obvious to combine Geisel and Reinert by modifying Geisel in view of Reinert to use direct anthraquinone dyes (contrary to applicant's position), then applicant's product would still not be obtained. The proposed combination does not reach the present invention.

While applicant need not rely on the following point, applicant wishes to make such point for the record. The rejection states near the top of page 4 that the properties and the advantages of the claimed product are not part of the claim, and the implication (and result evidenced by the rejection) is that such properties may be ignored. This is not so, as every invention must be considered "as a whole" as stated in the statute. Such properties do not exist in the prior art, and cannot be assumed to inherently exist in the prior art, because inherency in the prior art must be

"reasonably certain" or "inevitable", *In re Brink*, 164 USPQ 247, 249; *Ex parte Cyba*, 155 USPQ 756, 757 (1967); *In re Oelrich*, 212 USPQ 323, 326 (CCPA 1981). It is clearly not reasonably certain or inevitable that any prior art fabrics possess the new properties and advantages of the fabric of the present invention, and these points are discussed further below in reply to the rejection of claims 13 and 14.

To summarize, the proposed combination would not have been obvious for the reasons given above, and this is so even if it were known prior to the present invention to dye polyester fibers with disperse dyes; and, in any event, the proposed combination would not reach the present invention. Applicant respectfully requests withdrawal of the rejection.

Claim 12 has been rejected as obvious under §103 from Geisel in view of Reinert and further in view of Curtis et al USP 4,719,954 (Curtis). This rejection is respectfully traversed.

Claim 12 depends from and incorporates the subject matter of claim 1 from which it indirectly depends. Curtis has not been cited to make up for the deficiencies of Geisel in view of Reinert as pointed out above, and indeed does not do so. Accordingly, even if it were obvious to combine Curtis with Geisel, the subject matter of claim 12 would not be reached for the reasons pointed out above.

Applicant respectfully requests withdrawal of this rejection.

Claims 13 and 14 have been rejected as obvious under §103 from Geisel in view of Reinert and further in view of Delker USP 5,652,057 (Delker). This rejection is respectfully traversed.

Claim 13 recites an awning fabric having a number of particular characteristics. The applicant, who is an expert in this art, believes that no awning fabric having the features of claim 13 has ever been produced. Such features are certainly not disclosed in the references cited. Applicant respectfully notes that conventional awning fabrics usually have a weft density of 30 warp threads/cm and 15 weft threads/cm which results in a weight unit area of 300 g/m<sup>2</sup> or greater. Applicant's awning fabric as called for in claim 13 is denser in the number of threads than is conventional, and still weighs less (as does the fabric of claim 2), i.e. the awning fabric of claim 13 is very dense, but flatter and lighter than what is conventional.

Applicant respectfully notes that the burden is initially on the PTO to establish a *prima facie* case of obviousness. With respect, it is not sufficient to simply state that "it would have been an obvious modification to alter the weaving properties of the fabric" when there is no



evidence whatsoever in support of such a conclusion.

Applicant respectfully relies on *Ex parte Levengood*, 28 USPQ2d 1300, 1301-1302 (BPAI 1993):

In order to establish a *prima facie* case of obviousness, it is necessary for the examiner to present **evidence**, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art **would have been led...** to arrive at the claimed invention. [Citations omitted; italics in original].

Where is the evidence to support the conclusion of "an obvious modification"?

At best, the examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at appellant's invention because he had the necessary skills... This is an inappropriate standard for obviousness. [Citations omitted] That which is within the capabilities of one skilled in the art is not synonymous with obviousness [Citations Omitted].

There is no basis for the conclusion in the rejection of the obviousness of features which are not shown in the prior art.

Applicant understands the expression "it would have been an obvious modification to alter the weaving properties of the fabric" by the person skilled in the art to mean that what the applicant did is, in the examiner's view, a mere matter of choice which could be done by any person skilled in

the art (if he or she wanted to do so). But see *Ex parte Haas et al*, 144 USPQ 98, 99:

The Examiner ... says that [applicants' changes] are a matter of choice. It is not a matter of choice presented by the prior art [which] gives only one choice; a process which will not yield these new and improved results.

Also see *Ex parte Deere*, 118 USPQ 541, 544; and *Ex parte Krantz*, 61 USPQ 238.

In an unpublished decision (September 30, 1986) in Appeal 580-81, the Board, in reversing a rejection in a case where the examiner had brushed aside a recitation appearing in the claim under appeal, concluded as follows:

The examiner's assertion at page 4 of the Answer that the proposed modification would have been "an obvious matter of engineering design choice well within the level of one of ordinary skill in the art" is a conclusion, rather than a reason.

Applicant respectfully submits that it is contrary to fact in the present case that providing applicant's fabric having the claimed feature would require nothing more than an obvious modification; it is also contrary to the well established case law, including that cited above, which requires the prior art to show that alternatives are equivalent (see *In re Scott*, 139 USPQ 297; and *In re Flint*, 141 USPQ 299) before the PTO can validly hold that doing one in place of the other would simply

have been obvious. There is no such prior art of record in the present case.

Lastly, for a more recent decision on this point, attention is respectfully invited to *In re Chu*, 36 USPQ 2d 1089, 1095 (Fed Cir 1995).

In short, applicant respectfully submits that he cannot accept what effectively amounts to "official notice" that the features recited in claims 2 and 13 are common in fabrics for awnings, especially when applicant knows that the conclusion expressed in the rejection is simply incorrect. If prior art exists contrary to applicant's knowledge, then applicant has a right to face such prior art. If no such prior art exists, the claims should be allowed.

As regards Delker, applicant does not see how it is relevant to the present invention. Delker discloses high strength core-sheath monofilaments comprising a core of a thermoplastic polyester and a sheath of a different thermoplastic polyester. Delker does not disclose anything which makes up for the deficiencies of the proposed combination of Geisel in view of Reinert as discussed above, nor does Delker provide any teaching which would lead to the features of applicant's fabric which no prior art shows, as noted above, namely the claimed warp rate and weft density, or the weight of the fabric.

Withdrawal of the rejection is in order and is respectfully requested.

Claims 1-6 and 11 have been rejected as obvious under §103 from Xiao in view of Linville USP 4,679,519 (Linville) and Reinert. This rejection is respectfully traversed.

Xiao has been discussed in the preceding reply at pages 9 and 10, and applicant respectfully repeats by reference such commentary. Reinert has been discussed above.

Linville has been cited only for the purpose of providing evidence, according to the PTO position, that it would have been obvious from Linville to substitute monofilaments in the fabric of Xiao "to reduce the weight of the fabric", although applicant does not see that Linville teaches that monofilaments reduce fabric weight compared to the use of "fibers". (The advantages achieved according to Linville occur by the provision of the Linville disclosed laminated construction, not simply by the use of monofilaments.) Regardless, even if it were obvious to substitute polyester monofilaments in the Xiao fabric for Xiao's fibers, Xiao would still be deficient for the reasons pointed out in the preceding reply.

Reinert has been cited for the same reasons it was relied upon in the rejection based on Geisel in view of Reinert, and applicant's remarks made above against such rejection generally apply to the proposed combination of Xiao in view of Reinert. In this regard, applicant wishes to particularly emphasize the fact that Reinert does not make obvious a disperse dyed fabric.

As regards claims 2 and 11, applicant respectfully repeats the arguments from the preceding response at page 13. The rejection states that applicant's argument that Xiao's fabric is heavier than the claimed fabric "is not germane to the instant rejection because the examiner previously set forth the position that it would have been obvious to reduce the weight of Xiao's fabric." Applicant does not understand this rejection. Is the examiner saying that it is obvious to do something contrary to what the reference says? If so, what is the basis for "flying in the face" of the reference?

Again, applicant cannot accept "official notice" or any conclusion based on something not taught by the references. Xiao does not tell how to reduce the weight, but tells only how to increase the weight of the fabric. This feature of applicant's invention is not enabled by Xiao, or by any possible combination of the references.

Applicant respectfully requests withdrawal of the rejection under §103 of claims 1-6 and 11 based on Xiao in view of Linville and Reinert.

Claim 12 has been rejected as obvious under §103 from Xiao in view of Linville, Reinert and Curtis. This rejection is respectfully traversed.

As indicated above, claim 12 depends ultimately from claim 1 and incorporates the subject matter thereof. Xiao in view of Linville and Reinert do not make obvious the features of claim 1, and therefore do not make obvious the features of claim 12 which incorporates claim 1. Curtis does not make up for those deficiencies, and has not been cited to do so. Accordingly, the proposed combination, even if obvious (respectfully denied), would not reach claim 12.

Applicant respectfully requests withdrawal of the rejection of claim 12.

Claims 13 and 14 have been rejected as obvious under §103 from Xiao in view of Linville, Reinert and Delker. This rejection is respectfully traversed.

All the citations have been discussed above and/or previously, so no further discussion of the references individually is necessary.

Applicant maintains for reasons pointed out above that even if the combination were obvious, respectfully denied, the combination would not reach the claimed subject matter for at least two reasons:

(1) No reference provides the feature of the disperse dyes, and

(2) The rejection itself indicates that the references do not teach the claimed warp rate and weft density (nor do they teach the weight of the fabric).

Applicant repeats that to his best knowledge an awning fabric with the features of claim 13 has never been produced. Its features may have been desirable, but no one in the awning art or the awning fabric art knew how to produce such a fabric. However, by using disperse dyes according to the invention, it is possible to produce such a fabric with polyester filaments, thus providing a very dense but flatter and lighter fabric compared to fabrics which have been common for awnings up to the present time. Conventional awning fabrics, which have been produced for many, many years, usually have a weft density of 30 warp threads/cm and 15 weft threads/cm, resulting in a weight per unit area of at least 300g/m<sup>2</sup>.

Applicant's invention provides a number of advantages which have been delineated in the last reply, such

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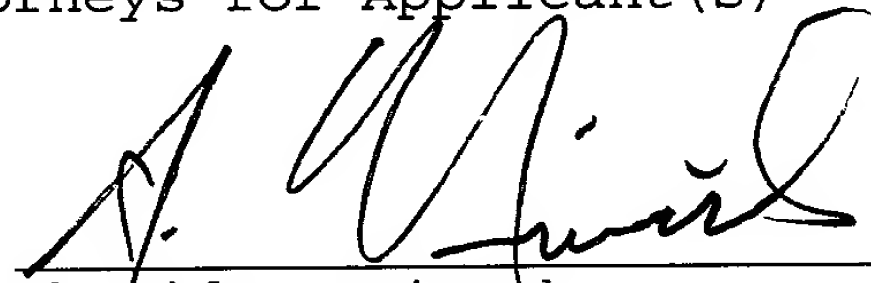
as at page 12. The prior does not make applicant's invention obvious. Applicant respectfully requests withdrawal of the rejection.

Favorable reconsideration, entry of the present amendment and allowance are earnestly solicited.

Respectfully submitted,

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